3.12 Public Services and Utilities

The following section discusses the provision of water, sewer, stormwater, solid waste, police, fire, health care, and school services in the project area. The Facility would use its own raw water supply well system and would manage its own wastewater through one of three alternatives:

- Beneficial use of the water for irrigated pasture
- Evaporation in an onsite, lined evaporation pond
- Temporarily storing onsite and hauling to a WWTP for offsite disposal

The raw water would be supplied from a deep aquifer zone not used by local residents or irrigation districts. No stormwater from the Energy Facility would enter a public stormwater system. The Facility would take steps to minimize the need for police and fire protection services. If needed, the Klamath County Sheriff and the Bonanza Rural Fire Protection District have indicated they would have adequate resources. The Energy Facility would not have an adverse impact on the ability of health care providers and educators to provide their services. Utilities and public service providers have adequate capacity to serve existing and new customers.

The information presented in this section is based on the studies and analysis conducted for the SCA as amended by Amendments No. 1 and No. 2, filed with EFSC on July 25, 2003, and October 15, 2003, respectively.

3.12.1 Affected Environment

The project area lies within a 30-mile radius of the Facility. It includes the southern half of Klamath County in Oregon, the northeastern corner of Siskiyou County in California, and the northwestern corner of Modoc County in California. In the project area there are four incorporated cities in Klamath County (Bonanza, Klamath Falls, Merrill, and Malin), two incorporated cities in Siskiyou County (Dorris and Tulelake), and no incorporated cities in Modoc County. Lorella and Dairy are unincorporated communities in Klamath County that are located within 12 miles of the Energy Facility.

Table 3.12-1 identifies providers of essential governmental services (listed in OAR 345-022-0110) in the project area. The following text describes, by service, the current service levels and proposed expansions or improvements in services for each community in the project area.

3.12.1.1 Utilities

3.12.1.2 Sewers and Sewage Treatment

Some of the larger communities, including Bonanza, Malin, Merrill, and Klamath Falls, have engineered wastewater collection and treatment systems. Klamath Falls has two Sanitary Districts: Klamath Falls Sanitary District and the South Suburban Sanitary District. Public services generally do not extend beyond the city limits of these incorporated jurisdictions, although some services are extended to serve developed areas within urban growth

boundaries. Domestic sewage from ranches and residences outside of urban growth areas and in rural parts of the project area is discharged into individual, privately owned septic tank and drainfield systems.

Klamath County confirmed that sewer systems generally do not extend beyond city limits or urban growth boundaries. Residents of Klamath County, including the unincorporated communities of Lorella and Dairy, are served by private septic systems. There are no known areas of substandard septic suitability (Nelson, 2002). Jurisdictions confirmed having remaining capacity. Neither Bonanza nor Malin anticipate any sizeable increase in demand. Merrill, the Klamath Falls Sanitary District, and the South Suburban Sanitary District are planning changes or expansions to their systems. Merrill plans to replace its system. Both sewer districts in Klamath Falls anticipate increased demand as a result of industrial, residential, and commercial development, and are developing capital facilities plans to address anticipated demands (Brakeman, 2002; Meek, 2002; Matthews, 2002; Hapalla, 2002; Colahan, 2002; Newmeyer, 2002).

For the alternative of storing and hauling to a WWTP for offsite disposal, the project proponent has contacted the two municipal WWTPs in Klamath Falls—the South Suburban Sanitary District and the City of Klamath Falls Sanitary District. According to managers at both facilities, each would be required to evaluate whether they can meet the EPA categorical standard to accept industrial waste or whether local ordinance provide for acceptance of truck-hauled wastewater. Over the life of the Energy Facility, other WWTPs may be constructed or considered for management of wastewater generated at the Energy Facility. The project proponent would arrange with a trucking company to routinely haul the wastewater stored in the wastewater storage tanks at the Energy Facility to the WWTP.

There are no engineered wastewater collection and treatment systems in the Modoc County portion of the project area. No impacts are anticipated in Dorris or Tulelake in Siskiyou County because of the commuting distance from the site, limited populations, and limited housing opportunities.

3.12.1.3 Water Supply

Farms and residences in unincorporated areas of the project area obtain water from individual, privately owned wells. There are a few community potable water systems in the project area, and irrigation districts offer nonpotable water service for irrigation.

Service providers of potable water for the cities of Bonanza, Klamath Falls, Merrill, Malin, and Klamath County were contacted. Bonanza provides no public water service; its residents are served by private wells completed in a shallow zone aquifer. The other cities have adequate capacities to meet service needs. Klamath Falls has an existing capital improvement plan for its water system that includes funds to upgrade and maintain storage, distribution, and production facilities. Merrill plans to add storage and complete line replacement in the next 5 to 8 years (Brakeman, 2002; Meek, 2002; Steiner, 2002; Newmeyer, 2002). Klamath County confirmed that public water systems typically do not extend beyond city limits or urban growth boundaries. Residents of unincorporated areas, including Lorella and Dairy, are served primarily by private wells (Nelson, 2002).

Two irrigation districts, Horsefly and Langell Valley, provide irrigation water to land around the Facility. Horsefly provides irrigation water for about 7,700 acres (CH2M HILL ,

1998). Langell Valley provides full service to 14,400 acres, and supplemental and variable service to additional land beyond that (U.S. Bureau of Reclamation, 1966). Irrigation district water is made available through surface water rights. Both irrigation districts draw from Gerber Reservoir through Lost River. Langell Valley also draws from Clear Lake through Miller Creek.

3.12.1.4 Stormwater

Stormwater facilities in the project area are limited because the area receives little precipitation, soil is quite permeable, and the communities are not large or dense urban areas. In rural areas, runoff drains to ditches, farm ponds, creeks, and local rivers. Most stormwater control measures are designed on a site-specific basis. There are no centralized public stormwater systems other than the system in Klamath Falls, which is administered jointly by the city and Klamath County and is reported to be in poor condition (Steiner, 2002; Newmeyer, 2002; Brakeman, 2002; Meek, 2002).

3.12.1.5 Solid Waste

Landfills. Solid waste generated in the project area is collected and hauled to one of the area's two landfills—Klamath Falls Landfill and Chemult Landfill.

Klamath Disposal (formerly USA Waste) has the hauling franchise for Klamath County, and parts of Lake, Modoc, and Siskiyou counties, including the Energy Facility site (Quifenberry, 2002). Most of the solid waste collected by Klamath Disposal is taken to the Klamath Falls Landfill, which is about 25 miles from the Energy Facility. The landfill is an unlined facility that accepts about 200 tons of solid waste per day. No hazardous waste is accepted. The Klamath Falls Landfill would cease to accept household waste in mid-2003. Construction and demolition waste would continue to be accepted for another 20 years.

The Chemult Landfill, at the north end of the Klamath County, is 70 miles from the Klamath Falls Landfill. The Chemult Landfill is an unlined facility capable of handling less than 20 tons of solid waste per day. It operates under a special ODEQ permit with an anticipated 20-year life span and only accepts waste from the north end of the County. No solid waste would be transported to the Chemult Landfill when the Klamath Falls Landfill ceases to accept household waste. There are no plans to expand either landfill (Henry, 2002).

3.12.1.6 Transfer Station Siting

The siting of a new transfer station is underway. The transfer station would collect waste to be taken by rail to Roosevelt Regional Landfill in Klickitat County, Washington. Tipping fees would almost double after the Klamath Falls Landfill is closed to household waste and that waste needs to be transported to the Roosevelt Regional Landfill. Fees would increase from the current $27 per ton to an anticipated $50 per ton (Henry, 2002).

Rabanco Regional Disposal Company, owner of Roosevelt Regional Landfill, is currently working with Klamath County to establish a transfer station. Roosevelt is permitted to accept up to 5 million tons per year of solid waste. At the current disposal rate of 2 million tons per year, it has an approximate 100-year capacity. It can accept solid waste from private haulers or through the proposed transfer station, depending on how the franchises work in a specific area. The new transfer station would be an intermodal facility and is expected to have the capability to provide rail containers to a project site to load sludge or other large

quantities of waste directly into a rail container. This method of direct loading eliminates the need to tip wastes through the transfer station. Containerized wastes can be placed from delivery trucks directly into rail cars.

3.12.1.7 Police and Fire Protection

Local police and fire departments serve the communities in the project area. Outside the incorporated areas, the Oregon State Police (OSP) and Klamath County Sheriff's Department provide police protection. Table 3.12-2 lists current staffing levels for police and fire service providers in Klamath County. Mutual aid agreements exist among most service providers, and emergency response is coordinated centrally through the Klamath County Emergency Communications District covering Klamath County except Crater Lake (Thompson, 2002). Descriptions of the services offered by the service providers follow.

Police protection is provided by Klamath County Sheriff's Department in the rural unincorporated areas of Klamath County. The department serves a population of 71,000 and an area of 7,000 square miles. The main station is in Klamath Falls. One resident deputy is assigned to the Bonanza area and resides there. The resident deputy would be the primary responder to any call. Response time for first responder can be within minutes. Backup response would be provided by another deputy from the Klamath County Sheriff's Department from Klamath Falls or Chiloquin, or an officer from Malin or Merrill, depending on availability and proximity (Dailey, 2002). The Merrill Police Department, Malin Police Department, and Klamath Falls Police Department have mutual aid agreements with the sheriff's department and OSP. Each of these departments serves primarily within its city limits or urban growth boundaries (Ruddock, Broussard, and Redner, 2002).

Rural fire protection around Bonanza and Klamath Falls is provided by Klamath County Fire District #1, Fire District #4, Fire District #5, and the Bonanza Rural Fire Protection District (RFPD). Bonanza RFPD, which serves 2,000 residents and covers a 120-square-mile service area, would be the primary responder for the Energy Facility site. The Bonanza RFPD extends south to Malin (RFPD) and north to Klamath County Fire District #5. The nearest station is 3 miles from the Energy Facility site, and response time is estimated at 10 minutes (Lee, 2002).

The secondary responder to the Energy Facility site would be Klamath County Fire District #5, which has a service area of 70 square miles, covering the area around Highway 140, north of Bonanza (Longoria, 2002). Fire District #5's closest station is 10 miles from the Energy Facility.

Klamath County Fire District #1 has a mutual aid agreement with Bonanza RFPD. It has the only state-certified HazMat response team and would respond to any hazardous material spill. Fire District #1 has a 300-square-mile area of primary response, serving a population of 4,500. Four of the district's six stations are operated 24 hours a day. Station #2, the closest to the Energy Facility site, is 15 miles away, with a response time of approximately 20 minutes (Romsby, 2002).

Klamath County Fire District #4 serves a limited population consisting of the southwest portion of Klamath Falls known as Stewart Lennox. The service area is only 10 square miles

and 3,000 to 4,000 residents are served. Fire District #4 has a mutual aid agreement with Bonanza RFPD, but is not a likely responder (Whisenhunt, 2002).

Keno RFPD, Bly RFPD, Malin RFPD, and the Merrill Fire Department have mutual aid agreements with Bonanza RFPD. Table 3.12-2 shows staffing levels for these service providers. Each of these service providers serves primarily within or immediately around its community. Keno and Bly are each more than 20 miles from the Energy Facility site.

3.12.1.8 Health Care

Merle West Medical Center in Klamath Falls is 35 miles from the Energy Facility site and serves the portion of the project area located in Klamath County. Merle West has remaining capacity, but does not have a trauma center. The closest trauma center is located in Bend. Bonanza Medical Clinic is 3 miles from the Energy Facility site. Lake District Hospital in Lakeview, Oregon, is about 65 miles from the site and Modoc Medical Center in Alturas, California, is about 75 miles from the site. Life Flight of Oregon is located in Bend and Medford, and provides helicopter and fixed wing transport 24 hours a day. By helicopter it is approximately 45 minutes from Bend or 35 minutes from Medford to Merle West Medical Center. When Life Flight is required, the patient is stabilized at Merle West, then sent to Bend, Medford, or Portland for treatment.

3.12.1.9 Schools

Four school districts serve the project area. Two of the four districts, the Klamath County School District and Klamath Falls City Schools, serve most of the project area. Table 3.12-3 summarizes capacity data for the public schools in the area.

All four school districts report declining enrollment. None of the districts has any immediate plans to put a bond on the ballot. Klamath Falls City Schools is considering the need for a bond to support capital improvements and maintenance, but additional capacity is not anticipated. Klamath County School District enrollment is at 86 percent capacity. Thirteen of 20 schools in the district have an enrollment of 70 to 88 percent capacity. Klamath Falls City Schools have a similar but lower enrollment-to-capacity ratio. The city's overall enrollment is at 78 percent capacity, and enrollment in five of its nine schools ranges from 53 to 79 percent capacity. The school districts in northern California have even greater remaining capacity (Coltrane, Davis, Hamilton, and Scott 2002).

Nonpublic elementary and secondary schools also provide services in Klamath County. According to the Oregon Department of Education's Web site, three schools offer preschool to grade 12, one school offers elementary grades only, three schools offer middle and high school grades, and two schools offer high school grades only.

3.12.2 Environmental Consequences and Mitigation Measures

The Energy Facility would not have any adverse effects on public services or utilities during its construction or operation. During construction and operation, the Energy Facility would be self-sufficient, providing its own sewage, water, and stormwater systems. The capacity of the Roosevelt Regional Landfill would be adequate to accommodate the increased demand. The local utilities would have adequate capacity to serve the residential demands of facility workers during construction and operation.

As described below, the Energy Facility would have no significant unavoidable adverse impacts on utilities or public services.

Impact 3.12.1. Energy Facility would have limited, if any, effects on the capacity of local utilities during construction, and no effects during operations.

Sewers and Sewage Treatment

The Energy Facility would generate little sanitary sewage during its anticipated 30-year operational period. Conservatively assuming that about 1 gpm or 1,500 gallons per day of sanitary sewage would be generated and discharged into a septic tank and drainfield, there would be no connection to or reliance on any public sewer system. Many of the 30 jobs created to operate the Energy Facility would likely be filled by local residents. Some employees would relocate to the area. Given the slow growth and current vacancy rates in the project area, employees that are new residents to the area are not expected to generate substantial demand for new housing units or sewer hookups from any sewer service providers. Therefore, operation of the Facility would have no adverse impact on sewer systems in the project area.

During the construction phase, a contractor would provide onsite chemical toilet service. Construction laborers not hired locally are expected to reside in existing houses or other temporary housing options that are already receiving sewer service on systems designed to accommodate the existing dwelling units or overnight accommodations. Accordingly, no substantial adverse impacts to local sewer systems would result from construction of the Facility.

Water

The sole source of water for construction and operation of the Energy Facility would be groundwater from a deep aquifer system. The deep aquifer system would be isolated from the shallow aquifer system and surface water. Under annual average conditions with supplemental duct firing, the Energy Facility would need 72 gpm from the Babson well. Under maximum consumption conditions with supplemental duct firing, that rate would increase to 210 gpm.

Nearby residents of Bonanza have expressed concern that water use at the Energy Facility would affect their available well water and the surface water available to irrigation districts. The residents obtain their water from private wells, many of which are shallow. As described below, tests conducted have shown that these residents' water source would not be affected by use of the Babson Well.

The Babson well is located approximately 2 to 3 miles east of the Energy Facility. The well is reported to have been originally drilled to depths exceeding 5,000 feet for oil and gas exploration in the 1920s, and currently has partial obstructions at depths of 1,870 and 2,050 feet. Previous borehole geophysics and aquifer testing at the Babson well (CH2M HILL , 1994) indicated the presence of two separate aquifer systems within the upper 2,050 feet of the borehole. The Energy Facility would use the deep water-bearing zones that are present below a depth of 1,580 feet to supply its water.

The shallow aquifer system (above approximately 500 feet) is a heavily appropriated basalt aquifer that is in varying degrees of hydraulic connection with the Lost River. The shallow

aquifer system is used for irrigation and domestic water supply. The Energy Facility would not use any water from the shallow aquifer system. An intensive 30-day aquifer test in 1993 at the Babson well (CH2M HILL , 1994) demonstrated that the deep groundwater-bearing zones below 1,580 feet are hydraulically isolated from the shallow aquifer system and surface water in the vicinity of the Energy Facility. No other Langell Valley area wells or water rights in the deep aquifer system are known to exist.

The project proponent conducted an additional long-term aquifer test at the Babson well during 2002 at an average rate of 6,800 gpm for approximately 30 days. An expanded observation well network of 31 different locations was used that included both shallow wells and deeper irrigation wells in Langell Valley, Yonna Valley, Swan Lake Valley, Malin, and Klamath Falls. There was no hydraulic response in the observation well network to pumping the Babson well that indicated a geologic connection between the two systems. This lack of response indicates that deep aquifer system withdrawals from a reconstructed Babson well would not affect shallow aquifer system water levels or supplies. Deep aquifer response suggests extremely high aquifer transmissivity; at the end of the 30-day pumping period, water levels had recovered to the pretest static level within 5 minutes. These observations show that the roughly 294 million gallons withdrawn for this test was an insignificant quantity relative to the rate and volume of water available to the Babson well.

During construction, bottled water would be provided at the construction site for potable use. Water for construction activities would be provided by the water supply well system and purchased as necessary during well reconstruction and construction of the water supply pipeline to the Energy Facility site. Water usage during construction would be intermittent, with no more than 100 gpm required at any time. Once the water supply well system was functioning and providing water to the site, construction-related water needs would be met by the onsite system.

The Energy Facility would use water from its own water supply well system to supply the demineralized water, potable water, service water, and sanitary systems along with continued dust abatement during the testing and commissioning phase.

There would be no reliance and therefore no impact, on any public or community water system.

Stormwater

Stormwater would be managed through three systems—the plant drains system, stormwater sewer system, and offsite stormwater diversion system.

For the industrial, developed part of the site, a plant drains system would route stormwater through an o/w separator and then into a collection basin where it would be routed back into the Facility water supply system for reuse. For rooftops, parking lots, and landscaped areas, stormwater would be routed to a stormwater pond. From the stormwater pond there would be two options:

- The preferred option is to discharge the water into a 4.7-acre infiltration basin where the water would be allowed to infiltrate into the ground. This option would not impact existing public systems.

- The second option would be to discharge the stormwater from the pond into the West Langell Valley Road side ditch. The stormwater, commingled with water runoff from the road and adjacent fields, would flow approximately 8,000 feet before discharging into an irrigation canal. This option would impact the West Langell Valley Road side ditch that is owned and operated by Klamath County.

Stormwater that would run onto the site from adjacent undeveloped areas would be routed around the proposed Facility in a network of swales and drainage ditches. This stormwater would be routed to existing natural drainages that currently carry this water or to the West Langell Valley Road side ditch.

During construction, stormwater would be managed in accordance with the Facility's NPDES General Construction Permit 1200-C and an erosion and sediment control plan. Because the Facility would not rely on offsite stormwater systems, there would be no impact on the ability of service providers in the area to provide stormwater services.

Additional information on these stormwater options is provided in Section 3.3.2.

Solid Waste

The Energy Facility would produce an estimated 50 tons of conventional solid waste (such as trash) per year. Recyclables would be separated and recycled. Other waste would be stored in onsite bins to be collected periodically and hauled to a licensed disposal facility.

Under the process wastewater management alternative involving an evaporation pond, the wastewater from hydrostatic testing and flushing and the wastewater from Energy Facility operations would be treated in a lined, onsite evaporation pond. Evaporation would leave a solid waste that would occasionally be removed for disposal in a licensed landfill. This solid waste would be a nonhazardous solid waste composed of water-treatment chemicals and constituents concentrated from the raw water supply.

As described above, the Klamath County Landfill currently accepts solid waste in the project area. Eventually the solid waste from the project area would be transported by rail to the Roosevelt Regional Landfill in southern Washington. The Klamath County Landfill and the regional landfill would accommodate solid waste generated as a result of the operation of the Energy Facility. Recognizing the size and capacity of the regional landfill, there would be no adverse impacts on service providers managing solid waste in the project area

A variety of nonhazardous, inert construction wastes would be generated by the Energy Facility. As much waste as feasible would be recycled, and any nonrecyclable construction wastes would be collected and transported to Klamath Falls Landfill. The Klamath Falls Landfill has adequate capacity to accommodate anticipated quantities of construction wastes so there would be no adverse impact on service providers managing solid waste in the project area. Closure of the Klamath Falls landfill to all but construction waste in mid-2003 would require wastes from Facility operations to be sent to a regional landfill.

Recommended Mitigation Measures. No measures beyond those included in the proposed project are recommended.

Impact 3.12.2. Energy Facility would not affect the level of service provided by local public services.

Assessment of Impact. The proposed Energy Facility would employ approximately 30 full-time staff who would be hired as much as possible from the local area. As a result, there would be little measurable population increase attributable to the project; therefore, the proposed Energy Facility would not place additional demand on local police and fire protection services.

Short-term increases in demand for local services by the in-migration of construction workers would not cause substantial impacts on the level of service because services possess capacity adequate to accommodate the increased demand.

Police

During operations, the Energy Facility site would be fenced and access controlled. Personnel would be on duty at the Energy Facility site at all times (24 hours a day) and available to respond to concerns at other portions of the Facility. These onsite security features would minimize opportunities for theft and vandalism. Police protection as currently provided by OSP and the Klamath County Sheriff's Office is adequate to serve current demand, and could serve the demand of the Facility (Dailey, 2002). The Klamath County Sheriff's Office has provided a letter stating the office's willingness and ability to serve the Energy Facility site (Dailey, 2002).

During construction, onsite security would be provided by the construction contractor, who would provide fencing and security services.

Fire

Fire risks would be addressed during operation of the Energy Facility. The Energy Facility would have its own fire prevention, protection, and fire detection system, including a dedicated water storage system, hose stations, and fire pumps. Water storage dedicated to fire protection use would be provided onsite in accordance with or exceeding code requirements.

Facility staff would receive basic fire suppression training, which would cover only small fires that can be controlled and/or extinguished with rack hoses and fire extinguishers. If a fire exceeds the resources available, assistance from the Fire District would be requested.

Fire risks during construction would be addressed in three ways: (1) work crews would suppress any small fires that can be controlled with extinguishers; (2) if a larger fire occurs, the fire protection district and 911 would be notified immediately; and (3) during mobilization, the contractor would coordinate with the local fire marshal and fire district regarding activities at the construction site.

Bonanza Rural Fire Protection District has stated that the fire district has the capacity to serve the Facility without adversely affecting its ability to serve the surrounding community (Lee, 2002). The Energy Facility was not mentioned as a concern by the Bonanza Rural Fire Protection District. The fire chief has provided a letter stating the district's willingness and ability to serve the Energy Facility site (Lee, 2002).

Accordingly, the Facility would not have an adverse impact on the ability of local departments to provide police or fire services.

Health Care

Merle West Medical center in Klamath Falls is located 35 miles from the Energy Facility site and Bonanza Medical Clinic is 3 miles from the site. Lake District Hospital in Lakeview, Oregon, is about 65 miles from the site and Modoc Medical Center in Alturas, California, is about 75 miles from the site. Life Flight of Oregon, located in Bend, provides helicopter and fixed-wing transport. By helicopter it is approximately 45 minutes from Bend to the Energy Facility site and Life Flight patients typically are taken to Merle West to be stabilized, then sent to Portland, Bend, or Medford for treatment. According to emergency medical service (EMS) personnel at Bonanza Medical Clinic, local medical facilities and transport services (described under Section 3.13.1.1 have adequate capacity to accommodate the Energy Facility during construction and operations (O'Keefe, 2002). The Bonanza Ambulance Service provided a letter documenting its capacity to respond to calls for service (O'Keefe, 2002).

Accordingly, the proposed Energy Facility would not have an adverse impact on the ability of local service providers to provide health care services.

Schools

The Energy Facility is anticipated to require 30 full-time employees. Most of these employees are expected to be hired from the local area. There would not be a substantial increase in student enrollment resulting from families relocating to the area for the new jobs created by the Energy Facility. Any increase in enrollment could be accommodated readily based on available capacity in the public school system and the availability of private school options. Enrollment is in a general decline in Klamath County and Klamath Falls City Schools. Capacity remains in almost all schools and both districts are seeking stability in enrollment, if not growth. Private school alternatives also exist. The scenario is similar in Modoc and Siskiyou counties (see Table 3.12-3).

The Energy Facility would be constructed using local labor to the extent possible. Nonlocal construction workers are not expected to bring their families into the area because of the short duration of construction work at the Energy Facility site. Without their families, nonlocal construction workers are not expected to affect school enrollment in public or private schools. However, even if some portion of the nonlocal workforce were to bring school-aged children into the area, local schools could readily accommodate the new students.

Several factors suggest that construction of the Energy Facility would not adversely affect schools. These factors include the likelihood of local hiring of construction workers; the improbability of a temporary, nonlocal workforce bringing families to the area; dropping enrollment; and remaining capacity.

Recommended Mitigation Measures. No measures beyond those included in the proposed project are recommended.

3.12.3 Cumulative Impacts

The Energy Facility would be largely self-sufficient, providing it own utilities and security services; therefore, it would not affect the capacity of services provided to the local community in the future. If process wastewater is managed by storing and hauling to a WWTP, agreements would be put in place to ensure the WWTP has the capacity to manage the Energy Facility's volume of process wastewater. The Energy Facility would employ 30 people, many of whom would be hired from local communities. Given the limited number of new residents to the project area, the low growth rate, and the existing capacity of public services and utilities, cumulative impacts to utilities and other public services would not be significant.

TABLE 3.12-1
Service Providers in Facility Area

Jurisdiction	Sewage Collection and Treatment	Water Supply	Stormwater Drainage	Solid Waste	Police/Fire	Health Care/EMS	Education
Klamath County	Private septic	Private wells	NA	Klamath County—landfill; Klamath Disposal—hauler	Klamath County Sheriff; Oregon State Police/Klamath County Fire District #1, #4; #5 volunteer RFPDs	Merle West Medical Center/Klamath County Fire District #1 and #4; volunteer ambulance providers	Klamath County School District
Klamath Falls	City of Klamath Falls, South Suburban Sanitary District	City of Klamath Falls	City of Klamath Falls and Klamath County	Klamath County—landfill; Klamath Disposal—hauler	City of Klamath Falls/Klamath County Fire District #1 and #4	Merle West Medical Center/Klamath County Fire District #1 and #4	Klamath Falls City Schools
Bonanza	City of Bonanza	Private wells	None	Klamath County—landfill; Klamath Disposal—hauler	Klamath County Sheriff/Bonanza RFPD	Bonanza Clinic; Merle West Medical Center/Bonanza Quick Response	Klamath County School District
Malin	City of Malin	City of Malin	None	Klamath County—landfill; Klamath Disposal—hauler	Malin Police Department/Malin RFPD	Merle West Medical Center/Basin Volunteer Ambulance	Klamath County School District
Merrill	City of Merrill	City of Merrill	None	Klamath County—landfill; Klamath Disposal—hauler	Merrill Police Department/Merrill Fire Department	Merrill Clinic; Merle West Medical Center/Basin Volunteer Ambulance	Klamath County School District
Lake County	Private septic	Private wells	NA	Klamath County—landfill; Klamath Disposal—hauler	Lake County Sheriff/Lakeview Fire Department	Lake District Hospital/Basin Volunteer Ambulance	Lake Education Service District
Siskiyou County	Private septic	Private wells	NA	Klamath County—landfill; Klamath Disposal—hauler	Siskiyou County Sheriff/California Department of Forestry and Fire Protection	Tulelake Health Center; Butte Valley Health Center/Basin Volunteer Ambulance	Butte Valley Unified School District; Tulelake Basin Joint Unified School District
Tulelake	City of Tulelake	City of Tulelake	None anticipated	Klamath County—landfill; Klamath Disposal—hauler	Tulelake Police Department/ Tulelake Fire Department	Tulelake Health Center; Modoc Medical Center/Basin Volunteer Ambulance	Tulelake Basin Joint Unified School District
Dorris	City of Dorris	City of Dorris	None anticipated	Klamath County—landfill; Klamath Disposal—hauler	Dorris Police Department /Dorris Volunteer Fire Department	Butte Valley Health Center/Basin Volunteer Ambulance	Butte Valley Unified School District
Modoc County	Private septic	Private wells	NA	Klamath County—landfill; Klamath Disposal—hauler	Modoc County Sheriff/California Department of Forestry and Fire Protection	Tulelake Health Center; Modoc Medical Center/Basin Volunteer Ambulance	Tulelake Basin Joint Unified School District

Sources:

Sewer and water: Steiner, 2002; Colahan, 2002; Hapalla, 2002; Nelson, 2002; Parks, 2002; Newmeyer, 2002; Grounds, 2002; Brakeman, 2002; Matthews, 2002; Meek, 2002; King, 2002, Clark, 2002

Solid waste: Henry, 2002; Quifenberry, 2002

Police/Fire: Dailey, 2002; Ruddock, 2002; Broussard, 2002; Redner, 2002; Romsby, 2002; Ketchum, 2002; Lawrence, 2002; Lee, 2002; Stratton, 2002; King, 2002, Clark, 2002; Oregon State Fire Marshal, 2002

Health Care/EMS: O'Keefe, 2002; Romsby, 2002;Vickerman, 2002; Ongman, 2002; Thompson, 2002; Ketchum, 2002; Tulelake Chamber of Commerce, 2002; Butte Valley Chamber of Commerce, 2002

Education: Davis, 2002; Hamilton, 2002; Stratton, 2002

Notes:

NA = Not applicable. Public stormwater systems typically are not found outside city limits or urban growth boundaries.
None = No centralized stormwater system is administered by the city or any special district.
RFPD = Rural Fire Protection District

TABLE 3.12-2
Police, Fire, and Emergency Medical Service Summary

Jurisdiction	Police			Fire			EMS		
	Agency	**Staffing**	**Services**	**Agency**	**Staffing**	**Services**	**Agency**	**Ambulances**	**Services**
Klamath County	Klamath County Sheriff	1 sheriff 27 patrol officers plus jail and support staff	Primary response (other than highway incidents)	Klamath County Fire District #1	1 chief, 1 operations chief, 1 training chief, 1 fire marshal, 3 battalion chiefs, 3 fire prevention officers, 12 captains, 57 fire fighters, 3 office staff	Primary response for HazMat/Mutual aid	Klamath County Fire District #1 Klamath County Fire District #4	6 2	Secondary response Mutual aid
	Oregon State Police	Not available	Primary response to emergency calls for service on Oregon's State and Interstate Highways	Klamath County Fire District #4 Klamath County Fire District #5	1 chief, 20 volunteer firefighters	Mutual aid Secondary response			
Bonanza	Klamath County Sheriff	See Klamath County	See Klamath County	Bonanza RFPD	1 chief, 1 assistant chief, 20 volunteer firefighters	Primary response (except for HazMat, see Klamath Co. F.D. #1)	Bonanza Quick Response	1	Primary response
Klamath Falls	Klamath Falls Police	1 chief, 1 captain, 1 code enforcement officer, 1 code enforcement tech, 1 captain, 1 lieutenant, 8 detectives, 36 patrol officers, 1 evidence tech, 3 clerical	Mutual aid*	Klamath County Fire Districts #1, #4, #5	See Klamath County	See Klamath County	Klamath County Fire District #1 and #4	See Klamath County	See Klamath County
Malin	Malin Police	1 chief, 2 part-time officers, 2 reserves (unpaid)	Secondary response/mutual aid*	Malin RFPD	Not available	Mutual aid	Basin Ambulance	4	Mutual aid
Merrill	Merrill Police	1 chief, 3 reserve officers, 1 clerk	Secondary response/mutual aid*	Merrill Fire Department	Not available	Mutual aid	Basin Ambulance	See Malin	See Malin
Bly	Klamath County Sheriff	See Klamath County	See Klamath County	Bly RFPD	1 chief, 25 volunteer firefighters	NA	Bly Ambulance	1	NA
Keno	Klamath County Sheriff	See Klamath County	See Klamath County	Keno RFPD	1 chief, 25 volunteer firefighters, 2 office staff	Mutual aid	Keno RFPD Ambulance	2	Mutual aid

Sources:

Police: Dailey, 2002; Ruddock, 2002; Broussard, 2002; Redner, 2002; Oregon State Police, 2002

Fire: Romsby, 2002; Ketchum, 2002; Lawrence, 2002; Lee, 2002; Whisenhunt, 2002; Oregon State Fire Marshal, 2002

EMS: O'Keefe, 2002; Romsby, 2002; Vickerman, 2002; Ongman, 2002; Oregon Public Health Services, 2002

Notes:

NA = Not applicable. Provider's driving distance to COB Energy Facility precludes it from providing any services.
RFPD = Rural Fire Protection District

* The Klamath County Sheriff has a written mutual aid agreement with Oregon State Police only. Informal agreements exist with local police agencies.

TABLE 3.12-3
Summary of School District Service Level in the Facility Area

Schools by District	City/Town Served	Enrollment	Capacity	Enrollment as % of Capacity
Klamath County				
Klamath County School District				
Bonanza Schoo1—K-12	Bonanza	439	600	73%
Gearhart Elementary School	Bly	85	125	68%
Chiloquin Elementary School	Chiloquin	300	350 w/portables	86%
Chiloquin High School	Chiloquin	270	325 w/portables	83%
Gilchrist School—K-12	Gilchrist	371	470	79%
Keno Elementary School	Keno	243	275	88%
Falcon Heights Academy—K-12 Alternative School	Klamath Falls	75	100	75%
Altamont Elementary School	Klamath Falls	284	350	81%
Fairhaven Elementary School	Klamath Falls	240	250 w/portables	96%
Ferguson Elementary School	Klamath Falls	523	550 w/portables	95%
Henley Elementary School	Klamath Falls	390	400 w/portables	98%
Peterson Elementary School	Klamath Falls	503	550 w/portables	91%
Shasta Elementary School	Klamath Falls	506	506	100%
Stearns Elementary School	Klamath Falls	343	400	86%
Brixner Jr. High School	Klamath Falls	470	535	88%
Henley Middle School	Klamath Falls	420	500	84%
Henley High School	Klamath Falls	645	720	90%
Malin Elementary School	Malin	157	180	87%
Merrill Elementary School	Merrill	165	180 w/portables	92%
Lost River High School	Merrill	278	350	79%
Klamath Falls City Schools				
Fairview Elementary School	Klamath Falls	250	350	71%
Joseph Conger Elementary School	Klamath Falls	226	250	90%
Mills Elementary School	Klamath Falls	461	500	92%
Pelican Elementary School	Klamath Falls	166	250	66%
Riverside Elementary School	Klamath Falls	116	220	53%
Roosevelt Elementary School	Klamath Falls	346	375	92%
Ponderosa Junior High School	Klamath Falls	475	525	90%
Klamath Union High School	Klamath Falls	985	1,250	79%
Mazama High School	Klamath Falls	783	1,100	71%
Siskiyou County				
Butte Valley Unified School District				
Butte Valley Elementary School	Dorris	150	250	60%
Butte Valley Middle School	Macdoel	54	100	54%

TABLE 3.12-3
Summary of School District Service Level in the Facility Area

Schools by District	City/Town Served	Enrollment	Capacity	Enrollment as % of Capacity
Butte Valley High School	Dorris	84	100	84%
Cascade High School (Continuation)	Dorris	12	20	60%
Picard Community Day School (Alternative)	Dorris	3	NA	
Mahogany Community Day High School (Alternative)	Dorris	3	NA	
Modoc and Siskiyou Counties				
Tulelake Basin Joint Unified School District				
Newell Elementary School—K-2	Tulelake and Newell	179	300	60%
Tulelake Basin Elementary School—3-6	Tulelake	181	300	60%
Tulelake High School	Tulelake	240	400	60%
Tulelake Continuation High School	Tulelake	10	20	50%

Sources: Davis, 2002; Hamilton, 2002; Coltrane, 2002; Scott, 2002

Note:

NA = Not applicable. District must accommodate all students who need services.